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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,803	07/30/2003	Hiroshi Ikeda	50023-208	8245

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McDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER

TRIEU, VAN THANH

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/629,803

Applicant(s)

IKEDA ET AL.

Examiner

Van T Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-19 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## ***DETAILED ACTION***

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 9-14, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by **Takata et al** [US 6,597,282].

Regarding claim 1, the claimed power line carrier system comprising a power branch device (the power branch device 100 comprising a commercial electrical power line 101, see Figs. 1 and 3, col. 1, lines 34-44 and col. 5, lines 4-8 and lines 60-65); and the power plug being removable connected to an in-house external power line (the electric plug 5a plugging into a plug socket 104, see Fig. 1, col. 5, lines 55-57); and the plurality of power outlets (the plurality of plug sockets for communications 6, see Fig. 1, col. 5, lines 20-23 and 31-46); and the built-in power line for connecting the power plug and the power outlet (the power line for communications 6 for connecting to the electric plug 5 and the power outlets 6, see Fig. 1, col. 5, lines 20-46); and the at least one electric device (110 or 111) configured to be plugged into one of the power outlets (6) via a SS communication terminal 3, see Fig. 1, and perform a power line communication in a first signal mode (see col. 2, lines 44-55 and col. 5, lines 16-23) and the second signal mode (see col. 2, lines 8-37 and col. 5, lines 47-52) with another electrical device (105,

107, 108), the first mode being for a communication between electrical devices (110 or 111) connected to the built-in power line (6), and second signal mode being for a communication between electrical device (110 or 111) connected to the built-in power line (6) and an electric device (105, 107, 108) not connected to the built-in power line (10b) via the in-house external power line (104), see Figs. 1 and 2, col. 5, lines 16-23 and 47-52; and wherein the power branch device (100) controls the power line communication to pass a power line carrier signal in the first signal mode only in the built-in power line (106), and allow a power line carrier signal in the second mode to pass in the in-house external power line (104), see Figs. 1 and 2, col. 2, lines 8-66, col. 5, lines 1-67 and col. 6, lines 1-59.

Regarding claim 2, the claimed power branch device supply (100) supplies power obtained via the power plug (5a) from the in-house external power line (104) to the at least one electric device (110 or 111) via the SS communication terminal 3 plugged into the one of the power outlets (6), see Figs. 1 and 2, col. 5, lines 31-59 and col. 6, lines 35-66).

Regarding claim 3, the claimed power branch device (100) further includes a filter (4) configured to reject a frequency component corresponding to the power carrier signal in the first signal mode and from a signal from the built-in power line (10b) to the in-house external power line (104), see Fig. 1, col. 5, lines 60-67 and col. 6, lines 1-42.

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Regarding claim 4, the claimed power branch device (100) further includes a route controller (the SS communication terminal 3) configured to transmit the power line carrier signal only to an electrical device (105, 107, 108, 110 and/or 111) of destination of the signal, see Fig. 1, col. 5, lines 31-59.

Regarding claim 9, the claimed the blocking filter configured to reject the power line carrier signal in the second signal mode, the blocking filter being placed between the inside and outside of a house (the blocking filter 4, see Fig. 1, col. 6, lines 2-42).

Regarding claim 10, the claimed electric device has a power code with a shield, which reads upon the PC devices 110 and 110, see Fig. 1, col. 7, lines 55-67 and col. 8, lines 1-23.

Regarding claim 11, the claimed at least one electrical device selects the first signal mode or the second signal mode according to the another electric device of destination of the power line carrier signal, the another electrical device being plugged into one of the other power outlets of the power branch device (the load devices 105, 107, 108, 110 and/or 111 are selected to be plugged in and communicated with each other respectively, see Fig. 1, col. 7, lines 47-67 and col. 8, lines 1-61).

Regarding claim 12, the claimed at least one electric device sends an inquiry to the another electric device in the second signal mode, and selects the first signal mode or

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the second signal mode according to the inquiry result, which reads upon the PC 110 or 111 controls every load device and collect operation information for each load device for connecting PCs and other load devices to alternating current power supply lines for communication 10 and 11, see Fig. 1, col. 8, lines 6-61.

Regarding claim 13, all the claimed subject matters are cited in respect to claims 4 and 11 above.

Regarding claim 14, all the claimed subject matters are cited in respect to claim 11 above.

Regarding claim 18, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 19, all the claimed subject matters are cited in respect to claims 1 and 5-7 and 18 above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takata et al** [US 6,597,282].

Regarding claim 8, **Takata et al** fails to disclose the first signal mode is compliant with ECHONET standard. However, **Takata et al** discloses the electric power line 101 having a plurality of plug sockets 104 for connecting of load devices 105, 107 and/or 108 to provide communication between the load devices as a first signal mode, see Figs. 1 and 2, col. 2, lines 44-55 and col. 5, lines 16-47. Therefore, it would have been obvious to one skill in the art to recognize that the house power line of **Takata et al** is functionally and compatible with the Japanese ECHONET standard because the ECHONET Japanese standard of the network using in-house power lines, has been a focus of constant attention. ECHONST is the acronym for energy conservation and Homecare. Network content: of which are explained here under according to the written standard of ECHONET, Ver.1.01, published by ECHONET.

3. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takata et al** [US 6,597,282] in view of **Motoori** [US 5,038,364]

Regarding claim 15, **Takata et al** fails to disclose the at least one electric device transmits a test signal to another electric device, and selects the first signal mode or the second signal mode according to communication condition obtained by transmitting the test signal. However, **Takata et al** teaches that the PC 110 or 111 controls every load device and collect operation information for each load device for connecting PCs and other load devices to alternating current power supply lines for communication 10 and 11, see Fig. 1, col. 8, lines 6-61. **Motoori** suggests that monitoring system sends signal throughout transmission line to the repeater after the loop back tests are carried out, see col. 1, lines 61-66 and col. 5, lines 9-23. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the test signal of **Motoori** for the selecting communication lines between load devices of **Takata et al** in order to prevent of failure transmission, minimizing errors and missing signal over the power line.

Regarding claim 16, all the claimed subject matters are discussed between **Takata et al** and **Motoori** in respect to claim 15 above, and performing the conversion according to an error rate of the test signal, see **Motoori**, col. 2, lines 25-66.

Regarding claim 17, all the claimed subject matters are discussed between **Takata et al** and **Motoori** in respect to claim 15 above, and performing the conversion according to



an attenuation rate of the test signal, see **Durkee**, col. 13, lines 66-67 and col. 14, lines 1-10.

### ***Response to Arguments***

4. Applicant's arguments filed on 22 February 2005 have been fully considered but they are not persuasive. A new reference of Takata et al is introduced to make the rejection smoother based on the Amendment and the update search.

### ***Conclusion***

5. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long horizontal flourish extending to the right.

**Van Trieu**  
**Primary Examiner**  
**Date: 6/29/05**